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Thirteen research reviews in this issue pertain to manpower research organized under these topics: (1) Manpower and Youth, treating youth unemployment and the youth labor market, (2) Manpower Needs, including an analysis of manpower research since World War II, health manpower planning, the shortage of skilled and technical workers, a projection of manpower needs, and employment requirements for entry level occupations, and (3) Manpower Development, discussing the role of the community resource person, federal training and work programs, the impact of licensing on job entry, and a project in which unemployed and underemployed persons were trained for skilled jobs in industry. "Plain Talk," a continuing column by the author, stresses the importance of vocational educators' making public a professional stand on manpower and its importance in education. Fourteen policy papers are recommended as must reading for vocational educators. The bibliography lists 26 related studies. A Research Visibility readership study reports frequency of reading, features of particular interest, utilization of information, and documents and publications ordered from reports listed. (DM)

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RESEARCH VISIBILITY

SYNTHESIS / APPLICATION / DISSEMINATION

SEPTEMBER 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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MANPOWER RESEARCH

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A new lease on life

THIS ISSUE of *Research Visibility* begins the third year of reporting to the AV JOURNAL readership. The year ahead represents a new "lease on life" inasmuch as the research reporting series terminated in June 1969 with the expiration of the contract between the AVA and the U.S. Office of Education. The third year is made possible by a continuation grant of the Division of Comprehensive and Vocational Education Research of the Office of Education.

It may be the most critical year yet in the short *RV* history, from the standpoint both of improving what has been attempted in the past, and of determining sharper focus and utilization of *RV* for a long-range future. On both counts, reader suggestions and comments are solicited. Let us have yours!

Topically, the new lease has the following tentative format:

SEPTEMBER: *Manpower Research*
OCTOBER: *Exemplary Programs*
NOVEMBER: *Comprehensive Planning*
DECEMBER: *Vocational Guidance: New Careers*
JANUARY: *Curriculum*
FEBRUARY: *Evaluation; Accreditation*
MARCH: *Research*
APRIL: *The Disadvantaged; The Handicapped; Consumer Education*
MAY: *Educational Personnel Development*

RV's reporting this year, and perhaps beyond, should be greatly improved by the influence of its Advisory Committee. The membership includes Vernon E. Burgener, Illinois; Lowell A. Burkett, AVA; Lawrence Braaten (ex officio), USOE; John Coster, North Carolina; Sidney C. High (ex officio), USOE; Mary Klaurens, Minnesota; Aaron Miller, Ohio; Jerome Moss, Jr., Minnesota, and Duane M. Nielsen (ex officio), USOE. Early on the Committee's agenda are consideration of a readership survey during 1969-70 and improvement of *RV* dissemination and utilization.

RV Readership Study. The readership study which was conducted last spring produced responses from 1,622 readers (two mailings were made to the same 10,000 sample). While many more returns might have assisted in tempering the research reporting for the year ahead, the limited responses provide a few clues to the effectiveness of the visibility effort.

Parenthetically, it is a symptom of the lack of visibility and recognition which seems to characterize research on the national level and the consequent disenchantment of Congress with it. Obviously, the *RV* staff cannot hazard a conclusion from the limited returns other than that of an overwhelming opinion (on the part of the 1,622 respondents) to "keep *Research Visibility* as it is." We are indebted to the respondents for the following data.

1969 "RESEARCH VISIBILITY" SURVEY QUESTIONNAIRE

1. Respondents' positions and the population

Position	*Responses*	*%*
Instructors	602	38
Administrators, supervisors	308	19
Coordinators	156	9
Professors	168	10
Counselors	29	2
Other	175	11
Not given	51	3
Unusable returns	133	8
Total	1622	100

2. Frequency of reading *Research Visibility*

	No.	*%*
Regularly	703	47
Occasionally	517	35
Seldom	179	12
Never	83	6

3. Feature(s) of particular interest

	No.	*%*
Introduction	356	12
Specific report	832	27
Bibliography	405	13
Reports	663	22
Plain Talk	715	23
Nothing	77	2
Other	24	1

4. Utilization of information

	No.	*%*
Yes	859	62
No	525	38

5. Information utilized for what purpose(s)

	No.	*%*
General information	383	40
Classwork	259	27
Research	214	22
Counseling	21	2
Reports to Others	82	9

6. Documents or publications ordered from reports listed in *RV*

	No.	*%*
Yes	298	22
No	1042	78

See Bibliography for information on availability of complete studies

Youth Unemployment: An Exploratory Probe

Youth Unemployment: Frictions in the Threshold of the Work Career—An Exploratory Probe. Herbert G. Heneman, Jr., and René V. Dawis. University of Minnesota Industrial Relations Center, Minneapolis. December 1968.

"Lack of education" and similar replies have been traditional responses to research questions regarding reasons for unemployment of youths or threshold workers. With answers of this nature, solutions such as more training or retraining are offered. Lack of education, however, may be only a surface symptom of more basic causes of threshold unemployment. If this is the case, then solutions which aim at intensification of training are inappropriate. On this assumption, this research project was originated to search for some of the more basic causes.

The project, which ran from July 1964 to January 1969, used questionnaires administered to high school students in the Twin Cities area of Minnesota along with follow-up interviews of graduates and dropouts to collect data for study. Designed as an exploratory probe, the project attempted to devise methods of measuring attitudes, needs, expectations, and beliefs and perceptions regarding the world of work which threshold workers have. The relation of these attitudes to the beginning work experience was sought.

Findings provided by analyses of data collected during the study demonstrated some of the basic conceptions which high school students have about the world of work. For example, concepts of work attitudes tend to vary widely. Although they tended to agree on questions relating to the "work ethic" and a personal sense of values, they often disagreed on questions about business ethics, labor market conditions and even about the necessity of working. Uncertainty was revealed in opinions regarding labor unions and the labor market.

Variables such as age, sex, social class, work experience, and sibling position influenced the work attitudes of those questioned, though to no great extent. It was found, however, that it is possible to measure work attitudes of threshold workers by reliable and relatively independent scales. These measured work attitudes can help to fill in where demographic variables, such as age and sex, and biographical variables tend to leave off in investigating the variance in the work experience of threshold workers.

Many problems arose in obtaining an appropriate sample of data for purposes of the study. For example, follow-up was easier to accomplish on graduates than on dropouts, thus creating a biased sample. In addition, since some students chose not to answer all items on the questionnaire, more than 5 percent of the forms had to be discarded. Suggestions for future data gathering in this manner would include, therefore, a re-evaluation of the questionnaire and the procedures for administration of it.

Analysis of the data acquired during the project leads to the conclusion that meaningful measurement can be made of the attitudes of threshold workers, and that relation of this data to demographic factors can be formed into sensible patterns. Although there is a significant relationship between work attitudes and demographic factors, this relationship is of a very low order of magnitude. This fact means that the addition of work attitude information to studies of work experience of threshold workers is valuable.

It was interesting to note that the most significant difference between high school graduates and dropouts who were the subjects of follow-up interviews was that the dropouts had held more jobs prior to the one they were holding at the time of the interview than had the graduates. Other than this fact, there were few other differences in the work histories of the two groups. One significant fact, though, was the difference in unemployment rates between the two groups. An aspect in which a great degree of unity was found for the two groups was that of job satisfaction, or lack of it. Most of the youths interviewed stated that they were satisfied with their present jobs.

The significance of this report is that it has established that work attitudes are an important frictional factor in the work experiences of threshold workers. Although the shortcomings which were encountered in conducting the study have caused the exact figures arrived at to be unreliable, in the opinion of the researchers, a step forward has been made. Research is now needed which will gather more precisely detailed data on the exact extent to which employment experience is influenced by work attitudes, and an identification is needed of the "mechanism" by which this influence works.

It will then be the job of educators and society in general to attempt to cope with these frictions, to minimize unfavorable attitudes, and to capitalize on attitudes which are demonstrated to bring about a successful transition into the world of work for youths who are "on the threshold."

The Youth Labor Market

The Youth Labor Market. Edward Kalachek. The Institute of Labor and Industrial Relations, The University of Michigan and Wayne State University. January 1969.

The rising social problem of the unemployment of teenagers, particularly Negro teenagers, has evoked an interest in literature and research on the subject. A review and evaluation of existing material, and an attempt at identifying areas where additional research is called for, are the purposes of this paper. The demand for labor, labor force participation, unemployment, and the rise in unemployment among youths are discussed. The author pinpoints the

areas where future research would be of the most value.

Some of the questions asked by the study are: "How readily can teenage labor be substituted for adult labor?", "To what extent does this depend on the occupational and industrial composition of the demand for labor?", and "Do minimum wage laws or other restrictions on wage flexibility result in the existence of a hiring queue and in the concentration of many teenagers toward its rear?"

Answers to these questions vary as widely as do the different approaches of investigators which are referred to in the report. However, other investigators have found significant relationship between the aggregate level of labor demand and employment of teenagers, and although each study shows a different degree of responsiveness for employment of teenagers, all of them agree that teenagers are concentrated near the rear of the "hiring queue."

Teenager Rate Declines

In examining labor force participation by teenagers, it was found that such participation has declined throughout this century. Much of this decline can be attributed to increased school attendance. It is the remainder of the decline which must be "food for thought and research," as this part is accounted for by the teenager who either does not wish to work, cannot find a job, or has not even looked for a job because he does not feel he will be able to find one.

Most of the data which we now have regarding teenage unemployment is "moment of time data"—data which tells us information on age, sex, color, and educational attainment of the labor force at any one moment in time. What we need now, however, is research which will analyze more substantial information to answer questions concerning the efficiency of the labor market in transforming novices in the market into productive adult members of the labor market. For example, it would be helpful to know whether disappointment in finding a job in the initial job hunt is an undesirable or beneficial result of the labor market in that it may teach youths that "ideal" job goals may have to be altered for reality.

What is called for in this study is a series of longitudinal studies in which a sample of teenagers would be followed as they made their entrance into the world of work. In this way it would be possible to determine which experiences in the search for employment and in unemployment were beneficial and which were detrimental in educating the teenager in the facts of employment. In addition, a longitudinal study of the labor market experiences of high school dropouts as compared with high school graduates is called for.

Other areas requiring in-depth study are those of motivation and the job hunt, employment of nonwhites, the place of the teenager in the structure of employment, and the need for improvement in the organization of the youth labor market. Information in these fields can help in formation of future policies in regard to improving the lot of the youth labor market through vocational guidance and job placement activities, and through giving new direction to vocational education and on-the-job training.

Pilot Programs Recommended

In conclusion, the author suggests that "what is needed is a number of specially designed pilot programs . . ." which would be both ". . . efforts to cope with current teenage labor market problems and as environment probes designed to create the data necessary for a better analysis of the merit of the program and of its most fruitful nature and size." These programs, it is also noted, should include a fully integrated data-collecting system in order to afford the most valuable evaluation of the programs.

Topic Two: MANPOWER NEEDS

See Bibliography for information on availability of complete studies

Post-World War II Manpower Research

An Analysis of Post-World War II Manpower Research, Policy and Program Experience Applicable to Current Manpower Planning for Peacetime Conversion of Military Manpower to Civilian Occupations. John F. Wallerstedt. Atlantic Research Corp., Alexandria, Va. October 1968.

In order to analyze research, policy and program experience from after World War II, and to assess its applicability to planning for conversion of military personnel to civilian jobs following the Vietnam conflict, this study has examined literature and research made of the civilian employment taken by World War II veterans to determine whether the skills learned in the Armed Forces were utilized in postwar jobs. In addition, an assessment has been made of programs which were designed to help men change from military to civilian employment. Because of experiences regarding available literature encountered during the initial period of the study, the emphasis has been placed on examining studies dealing with transferability of skills encountered by sample populations of World War II veterans and on programs, other than regular U.S. Employment Service Veterans programs, which have been initiated for men returning from Vietnam.

Factors such as mobility of the labor force, vocational education and training, an assessment of the job market, the transferability of occupational skills and knowledges to civilian employment experience, and employment of the disabled were investigated for both enlisted and career veterans.

In the chapter on vocational education and training, special emphasis is given to the impact of the GI Bill on the education and training of veterans. Consideration is given to parallels between the military occupational structure and the civilian labor force. Finally, contrasts between vocational training used by the Armed Forces and training given

in civilian vocational programs are examined.

In studying the impact of the GI Bill, the investigators found that at the most, only 20 percent of post-World War II veterans who attended college under the GI Bill would not have attended college without this assistance. It is interesting to note, however, that approximately one-third (2½ million) of those using the GI Bill had enrolled in craft, trade or industrial courses. In addition, many others enrolled in farm and other specialized training courses. In fact, the overall effectiveness of the GI Bill program was greater on the men who pursued vocational programs than on those who used the benefits to attend college.

Veterans Evaluate Training

Of the veterans who had received college or other training under the GI Bill, those who had less than six months of training did not generally feel that they were using the training in their jobs. However, of those who had had 30 months or more of training, only a small percentage felt that they were not using the skills acquired. Occupations in which the Armed Forces were found to be the primary trainer as of 1963 were medical and dental technicians, engineering and physical science technicians, bakers, and airplane mechanics. It is suggested, however, that there may be opportunity for improving military training's value as a training ground for civilian occupations. This is a field recommended for further study.

Results of the study showed that the trade school, more than any other, can utilize military-acquired skills towards civilian labor force training. It is suggested, therefore, that trade schools be a target of those planning more effective transition from military to civilian occupations.

Council Recommendations

Suggestions made by the National Manpower Council in 1954 for the improved coordination of military and civilian manpower policies are noted. These include the examination by the Armed Forces of the content of their training programs in order to make them broader and consequently more valuable to the trainee upon separation from the service. It was also suggested that disadvantaged youth should be influenced to stay in the Armed Forces longer to acquire more of the skills which will enable them to progress in civilian life.

In conclusion, it was determined by the study that in administration of a GI Bill for Vietnam veterans, close coordination with other training programs such as MDTA and military programs for the disadvantaged recruit, should be emphasized. It is increasingly important, in light of manpower problems today, that the Armed Forces, the Federal Government, and private industry attempt to coordinate training programs for the end purpose of improving the general work force of the nation. In addition, the job training needs *before*, as well as during and after military service, should be viewed in planning efforts.

Areas in which further research is recommended include:

- Studies of non-careerist military personnel (the majority of available material is on career military retirees).
- Studies which reflect interests of all governmental agencies.
- Studies structured to permit follow-up over a long period of time.
- Studies which would determine the value of non-academic schools, such as commercial and trade schools, to the needs of former servicemen.
- Studies of means of using the highly condensed training methods of the military in private industry.
- Studies of using the secondary school systems to prepare youths with non-military knowledge (such as mathematics training) which will be useful to them in the military.

Comprehensive Health Manpower Planning

Comprehensive Health Manpower Planning: Demonstration of Research-Conference Procedures for Estimating Health Manpower Requirements and in Evaluating Educational and Training Programs for Selected Health Occupations in Non-Metropolitan Areas. Edward B. Jakubauskas. Iowa State University, Ames, Iowa. May 31, 1968.

The goal of this pilot project was the investigation of the feasibility of the development of a comprehensive health manpower program for Iowa through a system of procedures for assessment of long-range manpower requirements, available manpower, health occupation trends and training, and patterns by which health occupation manpower is used.

The project was conducted through use of mailed questionnaires, interviews, and through preparation, evaluation and modification of working papers. A state-level conference on multi-county health manpower planning was held. In addition to developing a system of procedures for assessment of the health manpower situation in Iowa, the study attempted to (a) estimate future needs for Iowa, (b) seek out emerging health occupations, (c) investigate the possibility of a restructuring of health occupations to rely less on professional occupations and more on supportive ones, (d) evaluate existing training programs and make recommendations for changes, (e) determine interest in a comprehensive health manpower study, (f) analyze existing studies, and (g) prepare data collection instruments.

The state conference produced the following recommendations for future investigation in the health manpower area, particularly in Iowa:

- Continuation of establishment of additional health occupations education programs according to surveyed needs.
- Determination of reasons why health manpower needs exist (i.e., improper use of personnel, undesirable working conditions, etc.).
- Improvement of communications with health professionals, employers, the public, high school counselors, and students.
- Continued evaluation of health occupation training program curricula.
- Improved coordination of health-related activities.
- Informing the public and the legislature as to the need for support of health occupation education programs.

The state conference also produced a recommendation for the establishment of a centralized Health Manpower Data Center in Iowa.

The concept included close cooperation of the Data Center with various Iowa health agencies that are interested in and responsible for coordination and planning, training and education of health manpower, certification of occupational competence, health delivery services to consumers, health occupational associations, and research centers.

Other publications which developed out of the pilot study were:

A Forecasting Model of Health Manpower Requirements in the Health Occupations. Dennis R. Maki, Industrial Relations Center, Iowa State University, Ames, Iowa, 1967.

Nursing Attitudes and Turnover: The Relation of Social-Psychological Variables to Turnover, Propensity to Leave, and Absenteeism Among Hospital Staff Nurses. Thomas F. Lyons. Industrial Relations Center, Iowa State University, Ames, Iowa, 1968.

Economics of Collective Bargaining by Nurses. Karen S. Hawley. Industrial Relations Center, Iowa State University, Ames, Iowa, 1967.

Working Papers on Comprehensive Planning for Health Manpower Needs. Industrial Relations Center, Iowa State University, Ames, Iowa, March 13-14, 1968.

A publication which was in the process of completion at the time of the publication of the study is: *The Demand for Technical and Supportive Personnel in Pharmaceutical Occupations.* Kenneth Mericle (in cooperation with the Iowa Pharmacy Association).

Shortage of Skilled and Technical Workers

The Shortage of Skilled and Technical Workers: An Inquiry Into Selected Occupations in Short Supply. Walter Franke and Irvin Sobel, Institute of Labor and Industrial Relations, University of Illinois, Urbana, Ill. June 1968.

This study, conducted in Chicago and St. Louis in 1963-1966, covered six skilled and technical occupations in which there were critical shortages of workers: licensed practical nurse, medical technologist, tool and die maker, tool and die designer, engineering technician—electronics, and engineering technician—metal working. The purpose of the study, in examining "the causes of critical occupational shortages and the effectiveness of current labor market processes and institutions in removing shortages," was to see how labor market institutions adjust to labor market tightness. In doing this an examination was made of the entire process of the labor market including employer demand, training programs and job placement. Various factors, including qualifications for and length of training programs, cost of training and wage trends, were studied for their effect on labor supply.

Some of the specific questions which the study attempts to answer are: "What have been the local and national trends in demand for workers in the occupation?" "Through what process do persons reach a decision to enter into training for the occupation?" "How adequately do training programs prepare persons for the demands of the job?" "What is the role of public and private employment services, training institutions and other labor market institutions in facilitating the move from training to employment?" "What are the characteristics of employment in the occupation that either tend toward retention or loss of workers to the occupation?" "How do employers adjust to labor shortage situations?"

Work Around Shortages

In a summary of the situation in all six occupations studied, the authors concluded that rather than act aggressively to alleviate the shortage situations, employers prefer to work around the shortages. In addition, more adequate occupational information is needed at the local level. Dissemination should be wider, and should include prospective workers, employers and educators. It was suggested that job-redesign efforts could help alleviate shortages by taking some of the lesser jobs off the hands of highly trained technicians. Industrial employers seemed the least affected by labor shortages; in fact, the quality of their services appeared unaffected. But in the medical professions, the quality of services did suffer.

Specific findings in regard to the medical occupations included: (a) there is a high rate of turnover in these professions (almost 40 percent per year for LPN's); (b) better pay and working conditions might retard the rate of turnover, but to no great extent as most workers left for personal reasons, and (c) more research is needed into means of attracting and holding trained personnel in this field.

Non-Medical Occupations

In the non-medical occupations it was found that (a) there is a slight relationship between employee benefits (pension plans, hospitalization etc.) and the ability of an employer to attract technical help, and (b) although employers cited a serious shortage of skilled technical workers, they were able to overcome the shortage without raising wages by adjusting plant practices (increasing overtime worked, etc.).

In general, the study concludes that the factors which affect adjustment of the labor market vary greatly from occupation to occupation and labor market to labor market and that no one program can solve all problems in this area. The program must be tailored to the particular situation, and even then must remain flexible. For example, the MDTA program of subsidizing training costs of unemployed persons would not help in these technical fields because the training costs did not appear to be a barrier to entrance into one of these occupations.

Tomorrow's Manpower Needs

Tomorrow's Manpower Needs: National Manpower Projections and a Guide to Their Use as a Tool in Developing State and Area Manpower Projections. U.S. Department of Labor, Bureau of Labor Statistics. Washington, D. C. February 1969.

The purpose of the four volumes of this report is to fill the gap in information relating to manpower as cited by President Johnson in his *1964 Manpower Report to Congress.* He stated: "Projections of probable need in particular occupations are an essential guide for education, training and other policies aimed at developing the right skills at the right time in the right place." It is hoped that through the national

projections made in these volumes, and through the guides to use in State projections accompanying them, local manpower analysts will be able to formulate useful projections of local manpower needs. The information should also be useful in planning national programs of education and training.

Volume I is devoted to the problem of developing area manpower projections. It first sets down the techniques for the use of national employment trends and projections in the development of State and area estimates of manpower needs. Methods for relating national trends to local trends and then using this to estimate future needs are discussed. In addition, a description of one State's use of national figures to develop manpower requirements for itself and for metropolitan areas within the State is presented. Several recent reports describing manpower projection techniques are reviewed.

Volume I also describes techniques for estimating needs resulting from deaths and retirements of members of the labor force. It estimates that about one-half of the new entrants into the labor force from 1965 to 1975 will be used to replace workers who have left the labor force. In addition, references are made to techniques for estimating replacement needs for jobs that have been vacated through transfer to another occupation or through migration of workers to another area.

Adequacy of supply in individual occupations is the concern of the third part of this volume, with several approaches to the appraisal of it being discussed. Questions concerning whether or not training should be expanded in particular occupational areas cannot be answered unless adequacy of supply is considered along with future manpower requirements. An analysis of occupational supply must include estimates of the number of deaths or retirements for an occupation during the projection period, those who will stop working for some other reason, those who will transfer to other occupations, and those who will leave or enter the local area.

Appendices to Volume I are (a) Estimated annual death and retirement rates for selected occupations, by sex, for employed workers in the United States, and (b) Projections of the population and labor force for States and regions, by age and color.

Volume II presents national trends and outlook for industry employment and occupational structure. Reasons for expected changes are discussed. According to the study, employment requirements by 1975 will increase 22 percent over the 1966 level. Total civilian employment requirements will be an estimated 88.7 million, and this figure accounts for a 3 percent estimated unemployment rate in 1975. Manpower requirements will experience a heavy shift from agricultural needs toward nonfarm occupations.

National manpower requirement projections are made in this volume for each of the following categories: agriculture, mining, contract construction, manufacturing, transportation and public utilities, wholesale and retail trade, finance, insurance and real estate services and other miscellaneous services, and government employment. Under most of these categories many subcategories are identified and studied.

Volume III discloses information relating to national employment trends and projected requirements for 1975 for the following categories: professional, technical and kindred workers; managers, officials, and proprietors; clerical and kindred workers; sales workers; craftsmen, foremen and kindred workers (skilled workers); semiskilled workers (operatives); laborers; service workers and farm workers. Under these major categories, 40 different occupations were selected for closer examination. Past employment trends, economic and technological influences expected through 1975, and methods by which workers may become qualified are discussed for each occupation.

Projections for occupational requirements discussed in this volume had to take into account diverse factors which affect the occupational structure of the work force. Some of these factors are shifts in income and consumption patterns, changing age composition of the population, government policies on such things as programs and expenditures, and supply and demand in the labor market. With these factors taken into account, the estimated increase in white-collar workers between 1966 and 1975 is about 28 percent; for blue collar workers the estimated increase is 18 percent.

Volume IV is composed of a series of appendices. The first of these presents the assumptions regarding the characteristics of the projection period's environment and methodology used to develop national industry and occupational projections. The second appendix presents data on the national nonagricultural employment of wage and salary workers by industry for the years 1960 and 1966, and a projection of the employment of these workers in 1975. Both the 1960 total national employment by industry and a projection of the 1975 scene are given in another appendix. The ratio of total national employment to wage and salary workers in selected industries in 1960 and a 1975 projection is the subject of another table. In addition, 1960 and projected 1975 figures on the total national employment by occupation are presented.

One of the problems in compiling and evaluating manpower and employment statistics is the disparity between occupational titles used by the Bureau of Labor Statistics and those used in the Census. One of the appendices in Volume IV attempts to present a comparison of the titles, showing which are compatible and in cases where they are not compatible, substitutions which have been used for purposes of compilation of data from both sources.

Two appendices dealing with percent distribution of employment for 1960 and projected 1975 are directed toward industry employment and occupational employment. Another set of appendices presents the change factors in industry—one for the occupational structure of selected industry and occupational classifications and the other for the structure of selected occupational classifications alone.

A companion volume to *Tomorrow's Manpower Needs* is now being prepared by the Manpower Administration of the U.S. Department of Labor. The volume, the *Manpower Administration Handbook for Projecting Employment by Occupation for States and Major Areas* is scheduled for publication late this year.

The purpose of the volume will be to aid analysts in States in using various methods and data sources to develop manpower estimates and projections for States and areas.

Employee Skills/Training Acceptable to Employers

A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies. W. Halder Fisher, et al. Battelle Memorial Institute—Columbus Laboratories, Columbus, Ohio. June 14, 1968.

This study, which was undertaken in mid-1966 by the Columbus Laboratories of Battelle Memorial Institute, examines employment requirements for certain entry level job categories in order to determine the extent to which the requirements might change according to the degree of tightness or looseness of the labor market. This information is needed by the U.S. Office of Education in order that it might establish vocational education programs which contain the necessary balance of various components. The assumption is that the employer's own criteria of employability are the guide to use in formulating curricula for vocational education.

The main objectives of the study, then, were to determine whether the employer's actual criteria for hiring are the same as his stated criteria, and whether his actual criteria remain the same under changes in the labor market. This would make it possible to determine the minimum qualifications a person really needed to get a specific job done.

Seven Areas Selected

For purposes of the study, seven labor market areas were selected that represent various socioeconomic and geographical conditions and differing degrees of openness in the job market. Unemployment in the chosen areas varied from two to five percent. Three to seven large business establishments were used in each labor area, with Battelle field teams covering 100 cases of a job category in a certain establishment altogether, including 11 specific job categories. The method of investigation included both examination of personnel files and personal interviews.

Some of the study's findings are:

1. An employer's *preferences* do not change with the market's tightness or looseness, but his actual *requirements* may fall below his preferences when he needs to fill a job immediately.
2. Although educational requirements vary, they are usually specific.
3. High school diplomas are often required for unsubstantial reasons, such as the idea that it represents proof of perseverance.
4. Although skills must sometimes be obtained before employment, at other times, providing the person has the proper educational background, the employer will train him on the job.
5. The interviewer's reaction to an applicant and his personal characteristics are very important in determining employment.
6. Vocational education programs focused only on skills will not aid the employability of disadvantaged groups. Personal development (character, attitude, grooming, etc.) must also be taught.
7. A tight labor market may be loosened by lower employment standards, higher wages, or increased promotion opportunities.
8. Some entry-level jobs are dead-end jobs. Although these jobs can be frustrating to young workers, they can be ideally filled by older, less ambitious workers, or by the culturally deprived or mentally retarded.

In conclusion, several recommendations were made regarding improvements in research methodology. Among these was the recommendation that research be extended to cover "relationships between wages and job functions; actual rather than claimed promotions; comparisons between characteristics of promoted and nonpromoted workers, and relations between qualifications, supervisors' evaluations and promotions."

In recommendations for additional research, the suggestion was made that a wide variety of other entry-level jobs be studied in the same manner as was done in this study. In addition, jobs which are higher on the career ladder can and should be studied in this same way. In making this study, the researchers also noted a need for a study of the following: "the functional requirement of contract janitor service, the employer's attitude to the worker's police record, and the use of screening tests by employers."

Among recommendations for social action is that which suggested a shift in emphasis in vocational education programs from skill training to general personality and attitude education. Applicants for jobs must have a knowledge of the manner in which to seek a job, and the attitude which is expected of them on the job. Training in filling out of application forms, taking tests, and manner of dress and speech for an interview are basic requirements for helping employ the hard-core unemployed.

In addition, the use of experience-oriented training programs and cooperative work-training programs which use facilities and instructors from industry was suggested. Coordination should be improved between vocational education programs and employers' manpower needs. Finally, a restructuring of job descriptions to employ a greater range of people was recommended.

Michigan Technician Need Study

Michigan Technician Need Study: The Present and Projected Demand for Technically Trained People in Michigan. James D. Kelly. Ferris State College, Big Rapids, Mich. November 1967.

This study provides information on both existing and future needs for technically trained staff in Michigan. It reports on educational programs for training of technicians and points out areas where additional research is needed. The study was conducted through interviews with employers from 1,218 private firms and 94 private and government hospitals, and it covered a period from late 1965 to early 1967.

Specific studies were done on technical occupations in fields related to chemistry, mechanics, drafting and design, electronics, health, information, production, and in the civil-related field. For each field, areas of investigation included figures on present employment, present vacancies and projected needs for 1970, a description of *minimum* edu-

cational requirements and *preferred* educational requirements, a description of present inadequacies in education in the field and existent training opportunities.

Findings regarding present and future requirements for technicians are summarized in the accompanying Table. Besides the technician shortage indicated by this summary, other problems were found to be plaguing the technical field. Improper training and utilization of technicians minimizes their value to many employers. Although most employers want the education of their technicians to be directed to filling specific needs, it was found that a generalized background in such areas as English and written communication is necessary. Training opportunities must include both inservice training programs and post-secondary educational facilities. In addition, cooperative programs and tuition-refund programs were found to be popular and valuable.

A residual effect of the study was a stimulation of the employers' awareness of and interest in technicians. This, in itself, has increased anticipated future needs. In many cases employers were made to re-evaluate educational requirements for existing positions in their firms only to find out that they could be using trained technicians in positions where they had been requiring persons with a baccalaureate degree.

PRESENT AND PROJECTED NEED FOR TECHNICIANS IN MICHIGAN EXPRESSED AS A PERCENTAGE OF CURRENT EMPLOYMENT

Technician Classification Areas	Need as a Percentage of Current Employment of Technicians		
	Vacancies 1966	Additional Need 1970	Total Need 1970
Chemical Related	8%	26%	34%
Mechanical Related	8	22	30
Drafting and Design	16	34	50
Electrical and Electronics	18	25	43
Health Related	19	8	27
Civil Related	11	28	39
Information Related	11	41	52
Production Related	10	17	27

Nine recommendations set forth by employers and educators emanated from the study. In brief they call for:

1. More adequate channels of communication between educational institutions and employers.
2. Development of a more realistic concept of a "technician" for use of school counselors, and avoidance of the lack of interest which some counselors show for any post-secondary education which does not lead to a baccalaureate degree.
3. Emphasis to counselors that technician training programs are not for the "less able" student, but for students with particular aptitudes.
4. Development of more cooperative education programs in post-secondary institutions.
5. Study of the feasibility of "providing related instruction for apprenticeship programs in the manufacturing and machine trades."
6. Examination of the feasibility of additional technical training programs in community colleges with resident facilities.
7. Study of college placement service operations.
8. Development of more core-curriculum technician training programs.
9. Further study of the needs of certain types of firms on the local level.

Topic Three: MANPOWER DEVELOPMENT

See Bibliography for information on availability of complete studies

Role of the Community Resource Person

The Role of the Community Resource Person in the Organization of a Coordinated Education and Manpower Development and Utilization Program. Henry E. Holmquist. The W. E. Upjohn Institute for Employment Research, Washington, D.C. November 1968.

This publication is the report of a program for the development of persons in the community who would be able to act as catalysts to effect changes in the community toward the initiation of a comprehensive manpower development and utilization program. This program was tested in Greensboro and Wilmington, N. C. It was found in initial investigations in the two communities that the absence of the necessary catalytic force for coordination of program components was due, not to disinterest in these programs, but to misunderstanding of the vehicles of action which can be used. In other cases, staff deficiencies in responsible agencies or interagency hostilities caused failures. The resultant fragmentation of social welfare programs was the basic problem confronting the researchers.

The researchers attempted to overcome the lack of coordination in local programs by conducting a series of meetings with local leaders. The attention of the leaders was focused, through the meetings, on the manpower problems in their communities, and on the available programs for changing the situation. In addition, a community resource person was introduced into each community for the purpose of organizing these leaders and directing their activities. In selecting leaders who would participate in the meetings, the researcher sought those who would be able to have a direct bearing on future programs, rather than those having just an academic interest in the matter. Many unfavorable responses to what the researcher was

trying to do were voiced; however, some of these were reversed by the success of the program in Greensboro.

The series of meetings was considered the "educational phase" of the program. Following this was the "action phase" in which the researcher stayed on in a consultant capacity to assist in the development of programs. The "educational phase" had succeeded so well that catalytic activities had been assumed, to a great extent, by members of the community who had started a locally funded program, and the researcher was needed very little in this sense during the "action phase."

Wilmington Program Fails

The program in Wilmington was ended after an unsuccessful "educational phase." Although the businessmen and community leaders were anxious to receive assistance in manpower development, and recognized the fact that it was needed in Wilmington, the report states that the town was too set in its ways to allow new and progressive leadership and programs to interrupt. Personalities of persons who were in charge of the various programs seemed more important than actual progress being made by the program. For example, if the townspeople did not like a program administrator personally, then his program was also considered bad. And if a popular member of the community was the head of a program, according to the report, the program's deficiencies were completely overlooked.

The report notes that: "What began as a group effort quickly dissolved into an assembly of individuals each expressing a willingness to tackle local problems but not at a cost to whatever status quo was personally favored . . . anti-Negro, anti-union and anti-Federal Government emotions proved stronger than the felt need to analyze and solve problems."

Although the program aroused initial suspicion in Greensboro, confidence in it grew to such a degree that the original 26 member group of community representatives grew to 31 members as several local leaders requested invitations to join the group. The final overwhelming success of the program in this city was preceded by several problems, however. One of these was that once the program was accepted by the leaders, they tended to want to see immediate results. A desire grew to skip the training aspect of manpower development and concentrate on immediate filling of jobs with available manpower. The researcher was faced with the problem of demonstrating the merits of a complete program.

Finally, a manpower development proposal was developed, with the base from which the program was to operate being the Greensboro Chamber of Commerce. The researcher adds a note of caution in the report that the Chamber of Commerce just happened to be the best vehicle for implementation of the program in Greensboro, but that this may not be so in other cities in which the Chamber of Commerce holds a different status within the community. A shortcut method of collecting manpower resource needs data, in order that current data might be used in organizing manpower training programs and recruitment, was being worked on at the end of the research study.

Researcher Is Motivator

One of the conclusions derived from the Greensboro program was that the role of the Upjohn Institute researcher was invaluable in keeping the program moving. As one local participant of the program said, "We probably would never have gone beyond the talking stage of this manpower situation if there hadn't been the continuing incentive to move ahead that the Upjohn Institute program provided."

Aspects of the researcher's role included maintaining a degree of objectivity in evaluation of local conditions and potentials, preserving the necessary flexibility in the program and providing a base for continuity in the program and creation of local leaders who would be able to carry on after he left. One of the main secrets to the success of the Greensboro program was that the people were always made conscious of the fact that the program was *their* program, and not that of an outsider.

Upjohn Institute recommendations for future Office of Education action in this area include investigation by USOE technical staff of necessary information and designation of methods for collection of data on manpower at the local level. In addition, it is felt that provision must be made for integration into local school systems of a professional staff that can coordinate programs which involve local community representatives in programs for institution of training programs in the community. Alternatively, catalytic agents, such as those used for this study, could be introduced into communities by the Office of Education for the purpose of coordinating the activities of educators, public employment service directors and industrial leaders in formulating solutions to the manpower problems of the area.

Federal Training and Work Programs in the Sixties

Federal Training and Work Programs in the Sixties. Sar A. Levitan and Garth L. Mangum. Institute of Labor and Industrial Relations. The University of Michigan and Wayne State University. 1969.

This volume offers an updated compilation of a series of Policy Papers in Human Resources and Industrial Relations originally published by Levitan and Mangum. Part One of the volume traces the development of manpower programs for the disadvantaged, while Parts Two through Eight cover the seven major manpower programs which have been funded by the federal government: The Manpower Development and Training Act, The Vocational Education Act, The Job Corps, The Neighborhood Youth Corps, Work Experience and Training, Vocational Rehabilitation, and the Reorientation of the Federal-State Employment Service.

The Manpower Development and Training Act is discussed in terms of its objectives, its costs and the unresolved issues which encompass major policy decisions which will determine the program's future. The present objectives of this billion-dollar program are defined as (a) facilitating

employment of the unemployed, (b) reducing poverty, (c) lessening inflationary pressures, (d) meeting labor shortages, (e) upgrading the labor force, and (f) revamping traditional institutions. The unresolved issues, which have been debated all through the history of the program, concern whether or not the program should emphasize upgrading of the present labor force or rehabilitation of those who are unemployed, what balance should exist between on-the-job and classroom training, what the relation should be between federal and state roles in the program, and whether a permanent manpower program is needed.

Vo-Ed Act Covered

The origin and achievements of the Vocational Education Act of 1963 are covered in Part Three, along with an attempted evaluation of the status and achievements of vocational education and a consideration of innovations in the vocational education field. Principles for the reorientation of vocational education are drawn. Among these are the tenet that vocational education should not be directed solely to the acquisition of skills, but also, and perhaps more importantly, to personal preparation for entrance into the world of work. Toward this direction, it is suggested that preparation for the day when a person will have to enter the labor market should begin in elementary school with a realistic picture of the world of work, and continue on through junior high school with a study of our economic and industrial system. A full enumeration of the guidelines established by the Advisory Council on Vocational Education for a system of education for employment is made in this section, with an evaluation of the reactions to them.

Policy Assessed

In an assessment of the current status of federal manpower policy the following ideas are set forth:

1. There has been no systematic effort toward coordination of manpower programs; instead, individual acts were written, often with indefinite specific goals.

2. Through manpower program experimentation in the sixties, an identification was made of services which have a positive effect in improving the manpower situation. Yet, these services cannot be found through any one program or agency.

3. Technical assistance in coordination of programs, from federal to local agencies, is a heretofore unmet need.

4. Evaluation of existing programs before formation of new programs by Administration officials and members of Congress is needed. So far this has not been done, resulting in attempts at devising "instant policies for instant success."

5. Some programs have been successful and merit expansion, although in some cases funds could have been better spent elsewhere.

Better management is obviously needed in manpower programs. As this report notes, however, much has been done in little time, and there is still hope for better results in the future. Among future needs is the design of a functional approach to manpower training and a redesigning of the current administrative structure. As the authors see it, manpower policy in the future must ". . . incorporate the lessons of present programs into a viable manpower program in aid of the competitively disadvantaged," ". . . raise policy sights from entry level jobs to meaningful working careers" and ". . . explore the interface between self-support and income maintenance as the nation in its increased sensitivity to human distress seeks to guarantee both employment and income."

A Pilot Study of Licensing Practices

A Pilot Study To Determine the Feasibility of Investigating Nationally the Impact of Licensing Practices on the Availability and Mobility of Non-Professional Manpower in Occupations Where Skill Shortages Exist. Benjamin Shimberg and John V. Moe. Educational Testing Service, Princeton, N. J. May 1968.

Non-professional occupations identified by the U.S. Department of Labor as ones in which there were shortages of skilled manpower were the subject of a study of the impact of licensing on job entry and interstate mobility and of the feasibility of securing data on this subject. The purpose of the study was to compile information on the structure, process and effects of occupational licensing in five geographically diverse states: California, Florida, Illinois, New York, and Texas. It was discovered that it was necessary to actually visit licensing agencies and talk with their personnel in order to obtain accurate data on these subjects.

Occupations covered by the study included aircraft mechanics, practical nurses, plumbers, ophthalmic dispensers or dispensing opticians, dental hygienists, psychiatric technicians, clinical laboratory personnel, electricians, and heating and air conditioning workers.

First to be studied was the structure for licensing of these occupations in each state. Procedures and costs of licensing and the examination procedures in each state were also examined. Finally, a study was made of the mobility of workers in these occupations which required licensing. Hope was expressed by the authors of the study that further research be done on the effects of licensing requirements on mobility of persons in these occupations. Tentative findings, however, indicated that reciprocity agreements (or the lack thereof) between states in licensure exert a definite influence on the ability of persons to migrate from one state to another with the hope of practicing there.

The investigators conclude that licensing practices tend to inhibit job entry and interstate mobility. Continuing research is recommended in order to ascertain the impact of licensing on the supply of skilled manpower with an emphasis on problems experienced by minority groups in passing licensing examinations. Suggestions for conducting continuing study tend to lean away from a questionnaire approach. Instead, it is believed that the most value would be obtained through a continuation of the process of in-depth studies which were made for this report, supplemented by questionnaire surveys of all states for less detailed information.

Investigators feel that the significance of the pilot study was not in the data which it gleaned, but in the questions and issues raised by the

data regarding new possible areas of inquiry:

1. An investigation of the rationale underlying various licensing requirements.

2. A questioning of the means by which the "experience requirement" is satisfied and of whether or not this requirement is a block to some members of disadvantaged or minority groups in obtaining licensure.

3. An investigation of examinations used, and a determination of whether instructional courses prepare individuals for the exams.

4. Recommendation of improvements for examinations.

5. Investigation into whether or not there is a good understanding of the procedures for obtaining licenses.

6. A search for information regarding the attitudes of disadvantaged groups toward licensing.

It is also suggested that in choosing states for investigation, those states be chosen which offer the widest availability of information, so that results will be as complete and accurate as possible.

Training and Technology

Training and Technology: A Demonstration Manpower Development Project. Worker Training Program, Phase I. Oak Ridge Associated Universities. Oak Ridge, Tenn. May 1969.

The Training and Technology (TAT) project in which unemployed or underemployed persons were trained for skilled jobs in industry was supported by funds provided by the U.S. Office of Education, Department of Health, Education, and Welfare, and the U.S. Department of Labor under interagency agreements with the U.S. Atomic Energy Commission, Oak Ridge Operations. Phase I of the project, which is the subject of this report, was conducted from June 1, 1966, to Jan. 31, 1969.

Fourteen organizations participated in the TAT program which offered advanced training in mechanical drafting, machining, welding, industrial electronics, physical testing-quality control, and laboratory glass blowing. The training, conducted by the Nuclear Division, Union Carbide Corp., in a plant of the U.S. Atomic Energy Commission, used the educational resources of private industry, public education and government agencies. The first training course lasted 52 weeks. The second, because of improvements instigated by the first course, was reduced to 42 weeks. The second program also included a joint program with the Tennessee Division of Vocational-Technical Education which provided a 14-week program for vocational school students.

Evaluation of the TAT program was made possible through a comprehensive program of recruitment, training, placement, and follow-up. Progress of trainees was periodically tested, and final months of training were directed to the specific jobs each trainee would be taking on after graduation.

Although the TAT program included the unemployed, a major focus of the program was toward training the underemployed. The philosophy assumed in giving more advanced training to those already employed was that our nation loses as much from manpower wasted in underemployment as from unemployment. Skill development training, then, was supplemented by career development training, so that the trainee would have more opportunity to advance after placement upon completion of training. A series of seminars on job placement and career development were developed by the placement and guidance staffs of TAT. Use of role playing and organized discussion on subjects such as job interviews, applications and testing, and aspects to look for when seeking a job made the seminars interesting and valuable. Negro trainees, whose backgrounds often had left them unprepared to accept responsibilities and opportunities of career employment, were particularly benefitted by the seminars.

Three Major Advantages

The TAT program in its industrial setting was found to be valuable in three major ways: (a) trainees were expected to adhere to plant policies and practices, and thus acquired a strong sense of job responsibility which they could not have obtained in another setting; (b) instruction was provided by current industrial employees who could impart to the trainees a knowledge of the actual job requirements and practices, and (c) lack of motivation, usually a major training problem, was dissipated through the trainees' association with actual industrial employees whom they could look up to.

A comparison of scores of job-knowledge tests of TAT trainees and trainees in other programs indicated the value of the TAT industrial setting. TAT machining trainees attained in 42 weeks a significantly higher level of job knowledge than two-year graduates of machining programs in vocational schools, the same level as a group which completed three years in a machining apprenticeship program. The only group which scored significantly higher consisted of 25 advanced students in area vocational schools who supplemented their basic schooling with the 14-week TAT program. In addition, results of Ohio State University standardized trade achievement tests gave further support to the approach used in TAT.

Supportive Services Listed

Supportive services were given in order to make it more feasible for trainees to stay in the program. These services included arrangements for housing, transportation, and part-time work as well as obtaining legal and medical services and assistance in solving financial problems. Despite these services, there were dropouts of the program for various reasons including financial and medical problems and those who were drafted into the military or who returned to school. However, the dropout total for Phase I of TAT was only 15.8 percent of the enrollment.

Through the guidance and counseling services trainees were able to define their career goals, and through the job placement service they were assisted in finding jobs that would lead to these goals. Upon completion of training, full-time jobs with average starting salaries of almost $6,000 were accepted by 99 percent of the trainees. By Jan. 1, 1969, follow-up surveys indicated that of those still working the average TAT graduate's salary was $6,333.60 per year—compared with the average yearly salary of $2,125.60 upon entrance to the TAT program.

Of the various research and ex-

perimentation activities conducted in conjunction with the program, one of the most interesting was the "25 Percent Group" study. The original idea was to select underqualified applicants as 25 percent of the total enrollment. As it turned out, three "25 per cent groups" were identified by different criteria and studied and evaluated separately. Findings were that, for each group, these members of disadvantaged and minority groups were able to be trained and placed in employment, even though their overall achievements were slightly lower than the norm.

The good results obtained from the TAT Phase I program have brought about the establishment of TAT Phase II, a program for training of 320 disadvantaged persons in industrial skills each year. In addition, work was begun on a satellite program for training Chicago Negroes to work in a new AEC National Accelerator Laboratory in Batavia, Ill. The TAT Phase I program findings have also been applied to training programs in other industry-government complexes and vocational education programs.

Major Findings Given

TAT has demonstrated that what is needed is an integrated solution to the overall manpower problem. Fragmented attacks at small segments of the problem are ineffective tools against manpower waste. It must be recognized that unemployment is not the sole area of concern—that as much, or more, can be lost through underemployment. Educational institutions must understand and respond to actual job needs and opportunities, in addition to putting meaning into areas and methods of instruction by relating courses to current-day job opportunities. In developing a comprehensive manpower program for a given area, assessment should be given to (a) training needs of residents of the area, (b) local employment opportunities, and (c) educational and industrial resources which may be used in training.

Some of the major findings of the report are:

1. TAT offered improved methods of manpower training involving government agencies such as the use of the interagency agreement, the full coordination of all aspects of a project, and the use of an outside contractor for performance of technical procedures such as proposal development, contract approval and project administration.

2. The participating industry (in this case, the Nuclear Division of the Union Carbide Corp.) reaped benefits from the program in the form of staff development, filling manpower needs and increasing training capabilities of the plant.

3. Participating educational institutions have gained knowledge for future applications in all phases of manpower education.

4. TAT methods, including use of the industrial setting, the related-subjects curriculum and guidance and placement activities, were able to produce high-quality results in a short time.

In recruiting trainees for TAT, it was found that there were at least 5,000 persons in East Tennessee who needed job training. TAT, of course, was able to deal with only a small percentage of this number. However, these recruiting experiences did reveal the inadequacies of current manpower programs and the need for a coordinated approach to manpower development. The main recommendation to come out of the TAT program was that a coordinated approach which investigates training needs and resources of the area and then tailors a program to these aspects is a major need in human resource development.

Gainful Employment In Home Economics

A Pilot Study for Gainful Employment in Home Economics. June Cozine. Oklahoma State University, Stillwater, Okla. August 1968.

This pilot study was concerned mainly with the gainful employment aspect of home economics which was added to the vocational program with the Vocational Education Act of 1963. Objectives of the study were, " . . . to develop and test curriculum materials for three entry-level gainful employment courses—Child Care Services, Clothing Services and Food Services" and ". . . to formulate recommendations for policies and procedures to follow in initiating and developing gainful employment programs in home economics." Of this four-volume study, the last three volumes are suggested curriculum guides for each of these occupational areas.

In preparing the gainful employment courses, guidelines for the courses were first established; then surveys were conducted of job opportunities for both during the training period and afterward, and of the types of skills and personal qualities which employers specified. Tentative curriculum guides were then developed, and through evaluations by those using the guides, two revisions have been published.

Members of the research team found two different types of problems and concerns:

"1. Problems and concerns unique to the development of curriculum guides for gainful employment courses: interpretation of the program; knowing the local community; assessing abilities, personal characteristics, and interests of students; utilizing available facilities; scheduling; and work experiences.

"2. Problems and concerns usually considered in curriculum development; such as the overview, behavorial objectives, concepts and generalizations, learning experiences, selected resources, and evaluation procedures."

Among recommendations which came out of the study is the suggestion that, prior to initiation of gainful employment programs in a particular locality, it be determined whether or not there are sufficient work opportunities in that locality and whether or not there are enough interested students and educators to make the program worthwhile. Establishment of various advisory councils was recommended, along with a suggestion that close contact with prospective employers of trainees should be maintained to assure having the training programs relate to future jobs.

A few recommendations were made regarding the character and competencies needed by a teacher in a gainful employment program, but it was admitted that more research was needed on this point. Additional research was also recommended of selection of students for gainful employment education.

plain talk

George L. Brandon, Editor, Research Visibility

The summer season, including a good share of the springtime, was made "long and hot" by a great deal more than the elements. The "season" may extend into October and November. Principal causes of the turbulence are (a) Congressional action on the appropriations for the Vocational Education Amendments of 1968, (b) manpower legislation of the Department of Labor, and (c) review and approval of State plans for the administration of vocational education under the VEA's of 1968.

All of the causes are highly related to the future of the research component of the vocational education program. It is apparent that vocational educators must acquire and make public a professional stand on *manpower* and its importance in education. The manpower concern continues as an unmentionable by education as a whole; this fact is only too conspicuous by its absence from the Federal education budget. Labor and manpower, on the other hand, are practically synonymous.

Avalanche of Manpower Literature. Many hours of the midnight oil will be required of the vocational education community to keep abreast of the publications concerned with manpower. Not all of the volumes, to be sure, qualify as sophisticated research; but there is a high degree of relationship to important inquiry with the major payload of critical implications for vocational and technical education.

First off, one is confronted with manpower statistics and projections, and admittedly they can be confusing. This generalization can safely be made of a great deal of research and data coming from the social scientist. Leonard A. Lecht, an economist with the National Planning Association, in a presentation to the National Research Conference in Vocational Education last winter, pointed up a caution without excusing the vocational educator from obligation to be sensitive to manpower projections.

The educator searching for information about future manpower needs is likely to encounter a mountain, and sometimes a jungle, of estimates indicating projected requirements and job openings for cooks, nurses' aides, truck drivers, nuclear technicians, and others. This mountain of information requires a map if it is to make sense. To appraise the information, the user needs a framework relating the projections to their purpose, their uses and their limitations.

As an initial guide to the use of manpower projections, I would suggest an aphorism attributed to the American philosopher, Whitehead. It reads something like this: "Seek simplicity, but mistrust it." I would re-phrase Whitehead's aphorism to read: "Seek manpower projections, but use them with caution." Manpower projections, like other economic projections, can be useful in indicating strategic areas of change to be taken into account or the implications of alternative developments for the economy of manpower utilization such as the effects of either an increase or a decrease in defense expenditures in the coming decade. However, we are many lightyears away in the social sciences from being able to predict the future 5, 10 or 15 years from now. This is true for manpower needs, and it is also true for stock prices.

Of much more interest to the vocational educator, numerous studies of the education and training aspects of manpower are rolling off the press. A few of these major publications are reviewed in this issue's *RV*. Many more studies are currently "in process" and hopefully in the future will be reviewed, or at least show up in the *RV Bibliography*. It all goes to point up the critical need of vocational educators to acquire a thorough understanding of manpower, manpower policy and manpower planning at national, state and local levels and their relationship to vocational and technical education programs as they *are* and as they *should be*.

Some Manpower "Must" Reading. For vocational educators (and not inappropriate for general educators and academicians) the following should add a great deal more than a graceful position on professional bookshelves:

The *Policy Papers* of the Institute of Labor and Industrial Relations, P.O. Box 1567, Ann Arbor, Michigan 48106:

1. *The Design of Federal Antipoverty Strategy*. Levitan ($1.25)
2. *Making Sense of Federal Manpower Policy*. Levitan and Mangum ($1.25)
3. *Antipoverty Work and Training Efforts: Goals and Realities*. Levitan ($2.00)
4. *Vocational Rehabilitation and Federal Manpower Policy*. Mangum and Glenn ($1.25)
5. *Contributions and Costs of Manpower Development and Training*. Mangum ($2.00) (out of print)
6. *Jobs and Income for Negroes*. Killingsworth ($2.00)
7. *Reorienting Vocational Education*. Mangum ($1.25) (out of print)
8. *Reorienting the Federal-State Employment Service*. Nemore and Mangum ($1.25) (out of print)
9. *Antipoverty Housekeeping: The Administration of the Economic Opportunity Act*. Davidson and Levitan ($1.25)
10. *Equal Apprenticeship Opportunities: The Nature of the Issue and the New York Experience*. ($1.25)
11. *Job Development for the Hard-to-Employ*. Ferman ($2.00)
12. *The Youth Labor Market*. Kalachek ($1.50)
13. *Employing the Disadvantaged in Federal Civil Service*. Mangum and Glenn ($1.50)
14. *Education for Employment: The Background and Potential of the 1968 Vocational Education Amendments*. Evans, Mangum, Pragan ($2.50).

To tempt your appetite for the most recent release of the Institute, *Federal Training and Work Programs in the Sixties* by Levitan and Mangum ($6.50 soft; $9.50 hard) the authors in discussing the principles and report of the Advisory Council on Vocational Education (Essex Committee) observe:

> Even more impressive than the Vocational Education Advisory Council's unanimous report was the fact that the American Vocational Association appeared generally pleased with it. Perhaps it was the fact that while criticizing some of the traditional practices of vocational education, the Council was even more sharply critical of the general education curriculum as "preparation for nothing" and of the Office of Education for timidity in its leadership role. Undoubtedly involved was the fact that, though critical of the past and present, the Council recommended

expenditures of $1.6 billion per year for a system in which vocational educators would play a major role, but with built-in incentives for achieving the announced objectives. Despite these self-interest motivations, however, there is indication of a willingness to change and a hunger for leadership. ("Re-orienting Vocational Education," page 156.)

A Preview of Things To Come? *The Training and Development Journal* of the American Society for Training and Development tucks in its "Washington Report," this note:

RESEARCH BUREAU PHASEOUT: ETMR (Education-Training Market Report) has learned that Bureau of Research of Office of Education will be divided up into component parts and reassigned to related organizational units within agency. Higher educational research, for example, will be assigned to Bureau of Higher Education, where component was originally. Vocational Education research will be assigned to Bureau of Adult and Vocational Education, etc. Budget of Bureau of Research, which has been running about $100 million annually, will be absorbed within budgets of so-called mother bureaus. (page 64, Vol. 23, No. 7, July 1969).

Anyone for a Dissertation? Doctoral candidates may be missing fine assistance if they do not investigate the offer of research grants of the director, Office of Manpower Research, Manpower Administration, U. S. Department of Labor, Washington, D. C. 20210. The Manpower Research Grants Program sponsors dissertations, and applications are reviewed and grants awarded quarterly. It is notable that in less than four years, 125 dissertation grants of up to $10,000 each have been awarded to students at 74 different colleges and universities.

Personnel Development. For teacher educators and others interested in educational personnel development: Obviously, vocational personnel development is not the exclusive domain of colleges and universities, and state and local educational agencies are becoming highly involved and reflected in criteria of the Education Professions Development Act for funding proposals. Are you on the distribution list to receive *ERIC News,* the monthly publication of the Clearinghouse on Teacher Education? Joel L. Burdin, Clearinghouse director, will welcome your interest while the supply of the *News* holds out. He may be reached at the Clearinghouse, 1156 15th St., N.W., Washington, D. C., 20005. Long-range information plans for education were discussed in the *News* of Vol. 1, No. 5, May 1969.

bibliography

STUDIES REPORTED IN THIS ISSUE

Topic One: Manpower and Youth

"Youth Unemployment: Frictions in the Threshold of the Work Career—An Exploratory Probe." Herbert G. Heneman, Jr., and René V. Dawis. University of Minnesota, Industrial Relations Center. December 1968. 286 pages. (CFSTI # PB 183 074.)

"The Youth Labor Market." Edward Kalachek. The Institute of Labor and Industrial Relations. The University of Michigan and Wayne State University. A joint publication with the National Manpower Policy Task Force. January 1969. 90 pages. (Available from Publications Office, Institute of Labor and Industrial Relations, P.O. Box 1567, Ann Arbor, Mich. 48106.

Specify Policy Paper in Human Resources No. 12. Price: $1.50. Publisher pays handling and postage on orders accompanied by payment; orders to be billed will be charged 50¢ per order handling charges.)

Topic Two: Manpower Needs

"An Analysis of Post-World War II Manpower Research, Policy and Program Experience Applicable to Current Manpower Planning for Peacetime Conversion of Military Manpower to Civilian Occupations." John F. Wallerstedt. Atlantic Research Corp., Alexandria, Va. October 1968. 325 pages. (CFSTI # PB 183258.)

"Comprehensive Health Manpower Planning: Demonstration of Research-Conference Procedures for Estimating Health Manpower Requirements and in Evaluating Educational and Training Programs for Selected Health Occupations in Non-Metropolitan Areas." Edward B. Jakubauskas. Iowa State University, Ames, Iowa. May 31, 1968. 92 pages. (Available free from Industrial Relations Center, Iowa State University, Ames, Iowa.)

"The Shortage of Skilled and Technical Workers: An Inquiry Into Selected Occupations in Short Supply." Walter Franke and Irvin Sobel, Institute of Labor and Industrial Relations, University of Illinois. Urbana, Ill. June 1968. 468 pages. (CFSTI # PB 180 367.)

"Tomorrow's Manpower Needs: National Manpower Projections and a Guide to Their Use as a Tool in Developing State and Area Manpower Projections." U.S. Department of Labor, Bureau of Labor Statistics. February 1969. 518 pages. (Available from Government Printing Office, Prices: Volume I, $1.00, Volume II, $1.25, Volume III, $0.55, Volume IV, $2.00.)

"A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies." W. Halder Fisher, et al. Battelle Memorial Institute—Columbus Laboratories, Columbus, Ohio. June 14, 1968. 359 pages. (ERIC # ED 024 789. HC: $18.60, MF: $1.50.)

"Michigan Technician Need Study: The Present and Projected Demand for Technically Trained People in Michigan." James D. Kelly. Ferris State College, Big Rapids, Mich. November 1967. 191 pages. (ERIC # ED 027 375. HC: $10.55, MF: $1.00.)

Topic Three: Manpower Development

"The Role of the Community Resource Person in the Organization of a Coordinated Education and Manpower Development and Utilization Program." Henry E. Holmquist. The W. E. Upjohn Institute for Employment Research, Washington, D.C. November, 1968. 80 pages. (Single copies free upon request from The W. E. Upjohn Institute for Employment Research, 1101-17th St., N.W., Washington, D.C.)

"Federal Training and Work Programs in the Sixties." Sar A. Levitan and Garth L. Mangum. Institute of Labor and Industrial Relations. The University of Michigan and Wayne State University. 1969. 465 pages. (Available through Publications Office, Institute of Labor and Industrial Relations, P.O. Box 1567, Ann Arbor, Mich., 48106. Price: $6.50 soft, $9.50 hard cover.)

"A Pilot Study To Determine the Feasibility of Investigating Nationally the Impact of Licensing Practices on the Availability and Mobility of Nonprofessional Manpower in Occupations Where Skill Shortages Exist." Benjamin Shimberg and John V. Moe. Educational Testing Service, Princeton, N.J. May 1968. 96 pages. (ERIC # ED 023 841. HC: $5.35, MF: $0.50.)

"Training and Technology: A Demonstration Manpower Development Project. Worker Training Program, Phase I." Oak Ridge Associated Universities, Oak Ridge, Tenn. May 1969. 84 pages. (Available free from Training and Technology Project, P.O. Box 117, Oak Ridge, Tenn. 37830.)

"A Pilot Study for Gainful Employment in Home Economics." June Cozine. Oklahoma State University, Stillwater, Okla. August 1968. 373 pages. (Four Volumes, each may be ordered separately. Vol. I, ERIC # ED 023 881. HC: $2.15, MF: $0.25. Vol. II, ERIC # ED 023 882. HC: $4.70, MF: $0.50. Vol. III, ERIC # ED 023 880. HC: $8.05, MF: $0.75. Vol. IV, ERIC # ED 023 883. HC: $4.75, MF: $0.50.)

ADDITIONAL STUDIES

Topic Two: Manpower Needs

"The Feasibility of a Systematic Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations." Forbes W. Polliard. Indianapolis Hospital Development Association, Inc. Nov. 30, 1966. 80 pages. (ERIC # ED 016 079. HC: $4.00, MF: $0.50.)

"Vocational-Technical Education in the 1970's. Final Report." National Planning Association, Washington, D.C. 1970. (To be available from the U.S. Government Printing Office in early 1970.)

"Allied Health Manpower: Trends and Prospects." Harry I. Greenfield. City University of New York, Queens College. 1969. (Available from Columbia University Press, 525 W. 120th St., New York, N.Y. Price: $8.00.)

"Symposium in Occupational Education, Manpower, and Economic Change in the United States." Maynard Bemis. Phi Delta Kappa. Bloomington, Ind. July 1966. 30 pages. (ERIC # ED 010 127. HC: $1.40. MF: 25¢.)

"A Planning Study To Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry: Final Report and Proposal for Research." James W. Hensel. The Center for Vocational and Technical Education, The Ohio State University. July 1968. 70 pages. (ERIC # ED 025 616. HC: $3.60, MF: $0.50.)

"Statistics on Manpower: A Supplement to the Manpower Report of the President." U.S. Department of Labor. March 1969. 108 pages. (Available from Government Printing Office. Price: $1.00.)

"Manpower Requirements for National Objectives in the 1970's." Leonard A. Lecht. Center for Priority Analysis, National Planning Association. U.S. Department of Labor. 1968. 476 pages. (CFSTI # PB 177 821.)

"Manpower Planning in a Free Society." Richard A. Lester. Princeton University Press, Princeton, N.J. 1966. 227 pages. (Price: $5.00.)

Topic Three: Manpower Development

"Education and Manpower Strategies and Programs for Deprived Urban Neighborhoods: The Model Cities Approach. Final Report." National League of Cities, Washington, D.C. May 1968. 141 pages. (ERIC # ED 025 629. HC: $7.55, MF: $0.75.)

"Equal Apprenticeship Opportunities: the Nature of the Issue and the New York Experience." F. Ray Marshall and Vernon M. Briggs, Jr. The Institute of Labor and Industrial Relations. The University of Michigan and Wayne State University. A joint publication with the National Manpower Policy Task Force. November 1968. 57 pages. (Available from Publications Office, Institute of Labor and Industrial Relations, P.O. Box 1567, Ann Arbor, Mich. 48106.

Specify Policy Paper in Human Resources and Industrial Relations No. 10. Price: $1.25. Publisher pays handling and postage on orders accompanied by payment; orders to be billed will be charged 50¢ per order handling charge.)

"Employment Problems of Released Prisoners." George A. Pownall. University of Maryland, College Park, Md. 1969. 342 pages. (CFSTI # PB 183 543.)

"The Great Society's Poor Law: A New Approach to Poverty." Sar A. Levitan. The Johns Hopkins Press. Baltimore, Md. 21218. June 30, 1969. 348 pages. (Price: $7.95.)

"Summaries of Studies Concerning Scientific and Technical Manpower Education as of June 30, 1968." National Science Foundation (NSF). April 1969. 155 pages. (Limited number of copies available free from Robert W. Cain, Special Analysis Group, NSF, 1800 G St., N.W., Washington, D.C. 20550.)

"Manpower. Selected Acquisition Listing." Vol. 1, No. 5, May 1969. (Center for Studies in Vocational and Technical Education, Room 4226, Social Science Bldg., 1180 Observatory Drive, Madison, Wisc.)

DOCUMENT SOURCES

The material reported on in *Research Visibility* may be obtained from several sources. The source of each publication is indicated in each entry. The key to the abbreviations used there and instructions for obtaining the publications are given below:

CFSTI—Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151. Copies of reports with this symbol may be purchased for $3 each (paper) or 65 cents (microfiche). Send remittance with order directly to the Clearinghouse and specify the accession number (AD or PB plus a 6-digit number) given in the listing.

ERIC—Educational Resources Information Center, EDRS, c/o NCR Co., 4936 Fairmont Ave., Bethesda, Maryland 20014. Copies are priced according to the number of pages. The MF price in the listing is for microfiche; the HC price is for paper copies. Send remittance with order directly to ERIC-EDRS and specify the accession number (ED plus a 6-digit number) given in the listing. *How to Use ERIC*, a recent brochure prepared by the Office of Education, is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402; the catalog number is FA 5.212: 12037-A; price: 30 cents.

GPO—Government Printing Office. Send orders directly to Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402, with remittance for specified amount.

MA—Manpower Administration. Single copies free upon request to U.S. Department of Labor, Manpower Administration, Associate Manpower Administrator, Washington, D. C. 20210.

OTHER SOURCES—Where indicated the publication may be obtained directly from the publisher at the listed price.

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